STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

June 28, 2004

REGISTERED MAIL
RR 359 893 244 US

Des Moines Creek Basin Committee
c/o Jon Hansen, Senior Ecologist
King County Dept of Natural Resources
201 South Jackson, Suite 600
Seattle, WA 98104

Dear Mr. Hansen:

RE: **Order #03SEANR-5914**
U.S. Army Corps Reference No. 200300009 - Modify an existing wetland complex to increase stormwater capacity by constructing berms, installing new outlets by filling 0.6 acres of wetland, regrading 6.4 acres of wetland and 2100 linear feet of Des Moines Creek at SeaTac and Des Moines, Washington.

The request for certification for proposed work in the Des Moines Creek basin within the Cities of SeaTac and Des Moines, King County, has been reviewed. On behalf of the State of Washington, we certify that the proposed work, as conditioned by the enclosed Order, will comply with applicable provisions of Sections 301, 302, 303, 306 and 307 of the Clean Water Act, as amended, and other appropriate requirements of State law. This letter also serves as the State response to the Corps of Engineers.

This certification is subject to the conditions contained in the enclosed Order. If you have any questions, please contact Ann Kenny at (425) 649-7128. Written comments can be sent to her at the Department of Ecology, 3190 160th Avenue SE, Bellevue, WA 98008, or at e-mail aken461@ecy.wa.gov. The enclosed Order may be appealed by following the procedures described in the Order.

Sincerely,

Jeannie Summerhays
Section Manager
Shorelands and Environmental Assistance Program

JS:AEK:sa
Enclosure
cc: A. Sarah Rahman, Corps of Engineers

IN THE MATTER OF GRANTING A WATER QUALITY CERTIFICATION TO Des Moines Creek Basin Committee in accordance with 33 U.S.C. 1341 FWPCA § 401, RCW 90.48.260 and Chapter 173-201A WAC	))))))	**ORDER # 03SEANR-5914** Corps Reference #200300009 Modify an existing wetland complex to increase stormwater capacity by constructing berms, installing new outlets by filling 0.6 acres of wetland, re-grade 6.4 acres of wetland and 2100 linear feet of Des Moines Creek at SeaTac and Des Moines, Washington.

TO: King County Department of Natural Resources
Attn: Mr. Jon Hansen
201 South Jackson, Suite 600
Seattle, WA 98104

On July 3, 2003, a public notice for a proposed water quality certification from the State of Washington was distributed by the U.S. Army Corps of Engineers for the above-referenced project pursuant to the provisions of 33 U.S.C. 1341 (FWPCA §401). A supplemental public notice which addressed arsenic issues pertinent to the project was distributed by the Department of Ecology on May 28, 2004 and an informational meeting was held on June 8, 2004. No substantive comments concerning the project were received.

The Des Moines Creek Basin Committee (comprised of the City of Des Moines, the City of Sea-Tac, the Port of Seattle, the Washington State Department of Transportation, and King County) is proposing a suite of projects intended to help protect and restore Des Moines Creek by stabilizing the flow regime, reducing the rate of channel erosion, and by improving fish habitat. These projects, conceptually proposed in the *1997 Des Moines Creek Basin Plan*, include a regional detention facility, a high flow by-pass system, low flow augmentation and fish habitat enhancements. The elements of the Basin Plan covered by this permit include the modification of an existing wetland complex (Northwest Ponds) to significantly increase its stormwater capacity by constructing two berms, installing new outlet structures and the regrading of 6.4 acres of wetland and 2,100 linear feet of Des Moines Creek. About 0.6 acres of wetland will be filled to construct the berms. In addition, a high flow bypass pipe would be installed as a second outlet to Tyee Pond to convey excess stream flows directly to Puget Sound. The modified wetlands will be revegetated with native wetland species. The reconstructed stream channel and adjacent buffers will be revegetated with riparian species.

Construction of the regional stormwater control facility will alter a large portion of the existing wetland near the headwaters of Des Moines Creek. To minimize impacts, alterations are being proposed within highly disturbed portions of the wetland within an existing golf course and/or areas dominated by invasive species. The streambed of Des Moines Creek itself will be moved and the outlet lowered to increase the active storage available within the wetland. Once the project is completed, 1.1 acres of new wetland will be created and 4.2 acres of wetland converted to native plant communities. Surface water will be diverted from the East Fork of Des Moines Creek directly to Puget Sound through a bypass pipe during high flow conditions. A second diversion is also planned that would route surface water from the East Fork of Des Moines Creek to the regional detention facility located in the West Fort subbasin. This would occur during storm events that are greater than the predicted 2-year event.

The regional detention facility is designed as a flow control facility. Contributors of stormwater to the facility are separately regulated by the state of Washington under the state's National Pollution Discharge

Elimination System (NPDES) and the quality of water entering the regional detention facility will be regulated through the NPDES program.

New information concerning potential environmental impacts of the project was brought to the attention of the Department of Ecology by the DMCBC in December 2003. During the process of profiling the soils proposed to be excavated in order to expand the storage capacity of Northwest Ponds, the DMCBC discovered elevated levels of arsenic in peat soils. While the source of the arsenic is not known, former land use practices in the upper West Fork of Des Moines Creek basin and within the RDF project area consisted of agricultural use which may have included the use of herbicides and pesticides containing arsenic.

The DMCBC characterized the extent of the arsenic contamination at the project site and has proposed a sampling, analysis, and management plan in two documents: Des Moines Creek Regional Retention/Detention Facility Sampling and Analysis Plan (March 31, 2004) and Des Moines Creek Regional Detention/Retention Facility Arsenic Issues Evaluation (April 14, 2004).

Management of these arsenic-contaminated soils will occur in compliance with the Model Toxic Control Act under Washington's Voluntary Cleanup Program. The Des Moines Creek Basin Committee (DMCBC) initiated a site contamination assessment and a data collection and evaluation program and after consultation with the Department of Ecology, focused on identifying the impacts of the project to water quality. The assessment identified arsenic conditions that may be appropriately managed for protection of water quality using a group of best management practices (BMPs). During construction these BMPs include but are not limited to excavation and removal, in situ treatment and capping and will occur in conjunction with ground water, surface water and sediment monitoring both during and following construction. Data collected during and following construction will be used to establish contaminant conditions and evaluate potential release and migration of contaminants.

In addition to implementing BMPs and an extensive monitoring program, the DMCBC will submit a series of technical memoranda for Department of Ecology approval at key decision points prior to proceeding with the next phase of project implementation. Ecology approval will be required for evaluation methods, extent of over-excavation, techniques for handling excavated material, soil amendment and capping design, dewatering design, and runoff and dewatering treatment options. Monthly progress reports and data reporting are also required.

AUTHORITIES:

In exercising authority under 33 U.S.C. 1341, 16 U.S.C. 1456, and RCW 90.48.260, Ecology has investigated this application pursuant to the following:

1. Conformance with applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. Sections 1311, 1312, 1313, 1316, and 1317 (FWPCA Sections 301, 303, 306 and 307);

2. Conformance with the state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 U.S.C. 1313 and by Chapter 90.48 RCW, and with other appropriate requirements of state law; and

3. Conformance with the provision of using all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.

CONDITIONS OF ORDER # (03SEANR-5914) AND WATER QUALITY CERTIFICATION:

In view of the foregoing and in accordance with 33 U.S.C. 1341, 90.48.260 RCW and Chapter 173-201A WAC, water quality certification is granted to the Des Moines Creek Basin Committee subject to the following conditions:

A. No Impairment of Water Quality:

A1. Certification of this proposal does not authorize the Des Moines Creek Basin Committee to exceed applicable state water quality standards (Chapter 173-201A WAC) or sediment quality standards (Chapter 173-204 WAC). Water quality criteria contained in WAC 173-201A-030(1) and WAC 173-201A-040 shall apply to this project, unless otherwise authorized by Ecology. This Order does not authorize temporary exceedances of water quality standards beyond the limits established in WAC 173-201A-110(3). Furthermore, nothing in this certification shall absolve the Des Moines Creek Basin Committee from liability for contamination and any subsequent cleanup of surface waters or sediments occurring as a result of project construction or operations. Because the actions of the DMCBC are not being conducted under a consent decree with Ecology, this certification does not constitute a settlement by the state under RCW 70.105D.040(4) or any other provision of the Model Toxics Control Act. As such, this certification does not limit Ecology's authority nor bind the agency under that statutory scheme. The DMCBC must conduct the necessary monitoring and maintenance to assure that this site does not pose a threat to human health or the environment.

Des Moines Creek in the project area has been identified on the current 303(d) list as exceeding state water quality standards for fecal coliform. This proposed project shall not result in further exceedances of this standard.

A2. Arsenic Management. The Des Moines Creek Basin Planning Committee shall implement the *Des Moines Creek Regional Retention/Detention Facility Sampling and Analysis Plan* (March 31, 2004) with the following changes or clarifications:

a) Page 33, Section 4.4, Post-Construction Monitoring: Post-construction monitoring of sediments in the new channel of Des Moines Creek shall occur for a minimum of ten (10) years following completion of construction, and should monitoring reveal exceedences, Ecology shall further extend the period of monitoring, and shall require additional action to remedy the exceedances. Sampling shall occur quarterly for the first three years of monitoring. Sampling frequency may be reduced after three years after consultation and written approval of Ecology. For the purposes of this section, "Post Construction" means after the new channel of Des Moines Creek is completed (not at project completion).

b) Page 28, Section 4.2.7.4, Sample Collection of Sediment: If post-construction sediment sampling results in the new channel of Des Moines Creek exceed 50.9 mg/kg (dry weight) of arsenic, bioassays shall be run on the sediments to determine whether they exceed toxicity standards. The DMCBC shall consult with Ecology to determine the appropriate bioassay test method(s), sampling frequency and locations. In lieu of conducting bioassay tests, the sediments may be removed and disposed of at an appropriate upland site.

c) Page 32, Section 4.3.1, Phase 1 Construction Monitoring. The following sentence shall be amended to read: "Based on the testing results, the Des Moines Creek Basin Committee Compliance Coordinator (compliance coordinator) shall consult with Ecology to determine the required frequency of monitoring and/or adaptive management measures."

d) Page 33, Section 4.3.2, Phase II Construction Monitoring. The following sentence shall be added after the end of the first paragraph: "If the turbidity standard in WAC 173-201A-030(1)(c)(vi) is exceeded in the creek (greater than 5 NTU when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU), an additional grab sample shall be collected at SW-1b and submitted for total and dissolved arsenic (As) analysis. The turbidity exceedance shall be reported to Ecology as soon as possible by calling Ecology's 24-hour Report line at 425-649-7000, but in all instances within four (4) hours of occurrence. Sample results for turbidity-triggered arsenic sampling will be reported to Ecology in the regular monthly report."

e) Page 45, Section 5.5, Treatability Testing: The following sentence shall be amended to read: "A detailed treatability work plan will be prepared and submitted to Ecology for review and approval if it is determined that treatment will be necessary."

A3. Submittal of Technical Memorandums: The DMCBC shall submit three copies of the technical memorandums identified in Attachment A to Ecology for review and written approval as soon as they are ready for Ecology.

A4. The Des Moines Creek Basin Committee shall continue to participate in Ecology's Voluntary Cleanup Program in order to ensure that arsenic-contaminated soils are appropriately managed.

A5. If Ecology determines that the mitigation measures applied by the DMCBC to address arsenic contamination at the site do not prevent degradation of existing surface and groundwater quality conditions due to arsenic contamination, Ecology shall require additional corrective action.

A6. "As-Built" Report provided to Ecology following the completion of construction shall include the location and all relevant details of any residual contamination remaining in place and remedial actions completed during the course of the project and at the end of the project, including but not limited to location, nature and extent of any arsenic contamination remaining within the project boundaries, any cap, cover or other containment measure(s), and any institutional controls instituted or considered part of the protectiveness of the remedy. Location, nature and extent of arsenic (As) contamination at the property at the end of the project shall be included in the deed restrictions that run with the property, and must be reviewed and approved by Ecology prior to filing the restrictive covenant(s).

B. Project Mitigation:

B1. Impacts to wetlands and other aquatic resources shall be mitigated through measures described in the following documents, except as modified by this Order:

- Des Moines Creek Regional CIP, Regional Retention/Detention Facility Grading and Planting Plans prepared by the King County Department of Natural Resources and Parks,

Water and Land Resources Division, received by the Department of Ecology on November 15, 2003.

- Wetland Impact and Mitigation Summary (*Summary*): Des Moines Creek Basin Restoration Projects, prepared by the King County Department of Natural Resources and Parks, Water and Land Resources Division, Revised November 2003.

- Letter from Jon Hansen of King County to Ecology, dated October 16, 2003.

- Plan Sheets dated June 24, 2004 showing temporary bridge crossings and bioengineered coir wrap lift.

Mitigation elements are more fully described in the above-referenced documents and as revised through the conditions of this Order. If conflicting language exists for a particular issue, the most recent document prevails. Conditions of this Order take precedence over any conflicting language in the above-referenced documents.

B2. In addition to conditions contained in the above-referenced documents, the following requirements shall be conditions of this Order:

a) Preconstruction Meeting: The DMCBC's wetland biologist shall be present at the pre-construction meeting for the project.

b) Field Supervision: The wetland grading and plant installation activities shall be field supervised by a professional wetland biologist from King County, or other wetland-qualified consultant(s), to ensure proper elevations are achieved and plants are appropriately placed.

c) "As-Built" Report: An "as-built" report, including up-to-date as-built drawings, documenting the final design of the project area shall be prepared when site construction and planting is completed. The report shall include the following:

- Final site topography;

- Drawings in the report shall clearly identify the boundaries of the mitigation areas, including the buffers;

- Photographs of the area taken from permanent reference points;

- A planting plan showing densities, sizes, and approximate locations of plants (this may be a "typical" planting scheme), as well as plant sources and the time of planting;

- Types of habitat features (e.g., snags, large woody debris) and their locations;

- Locations of sampling and monitoring sites; and,

- An analysis of any changes to the mitigation plan that occurred during construction.

A copy of the "as-built" report shall be sent to Ecology within 60 days of completing construction and initial planting.

d) Upland buffers along the newly created channel of Des Moines Creek: An upland buffer zone with appropriate native plant species shall be established on both sides of the newly created channel to the extent that the buffer area is not already being provided by the Port of Seattle as a part of its mitigation for the Third Runway. A draft plan sheet showing the buffer and proposed plantings shall be submitted to Ecology for review and approval thirty days after receipt of this permit.

e) Restrictive Covenants: Permanent protection of the wetland mitigation and preservation areas and buffers shall be recorded on the property deed. The restrictive covenants shall be consistent with the restrictive covenants required by Ecology in the 401 Certification issued to the Port of Seattle for the construction of the third runway (Order #1996-4-02325(Amended-2), June 7, 2004). Draft copies of the restrictive covenants shall be submitted to Ecology for review and approval no later than thirty (30) days after receipt of this permit. The Ecology-approved restrictive covenants shall be recorded with King County after completion of all Third Runway and DMCBC mitigation projects in the area.

Any changes to the restrictive covenants shall require written approval by Ecology.

Violation of any term of the restrictive covenants shall be considered a violation of this Order.

f) Maintenance:
The Des Moines Creek Basin Committee is responsible for maintenance of the wetland mitigation sites such that the required performance standards are met.

g) Monitoring and Contingency Plan: Monitoring shall be done as described in the *Summary*, with the following changes or clarifications:

> i) A written report describing the monitoring results will be submitted to the Ecology's Alice Kelly no later than December 31st of each monitoring year over a ten-year period with reports submitted in years 1, 3, 5, 7, 9 and 10, per Table 5 in the *Summary*. Each monitoring report shall include photographic documentation of the project taken from permanent reference points as established in the as-built report.
>
> ii) Should performance standards not be met, thereby requiring a contingency plan, the DMCBC must receive Ecology approval of this plan prior to implementation.

h) Performance Standards: Wetland mitigation sites shall be monitored for compliance with the performance standards referenced in Table 5 of the *Summary*. The following condition is added to this project:

> i) If the results of monitoring show that the mitigation areas do not satisfy the performance standards set forth in the *Summary*, additional monitoring and mitigation may be required (e.g., replanting, soil amendments, selection of alternative species, revaluation of the project goals, objectives and performance standards etc.). Any

additional monitoring or mitigation measures are subject to review and approval by Ecology.

i) The DMCBC is hereby authorized to construct up to three bridges across the channel of Des Moines Creek to accommodate golf course play. Such bridges shall be considered temporary in nature and shall be completely removed upon implementation of the Port of Seattle's approved wetland mitigation plan within the Tyee Golf Course area.

The DMCBC shall submit updated plan sheets for review showing the proposed bridges and any other proposed features adjacent to the creek no later than 5 days prior to commencement of construction.

C. **Construction:**

C1. Construction Stormwater and Erosion Control: Work in or near waters of the state shall be done so as to minimize turbidity, erosion, and other water quality impacts. Construction stormwater, sediment and erosion control Best Management Practices suitable to prevent exceedances of state water quality standards (*e.g.*, hay bales, detention areas, filter fences, etc.), shall be in place before starting clearing, filling, and grading work at the impact sites.

C2. Prior to clearing and grading in wetlands, the adjacent wetlands shall be protected from construction impacts. Construction fencing or flagging (using brightly colored tape at no less than twenty-five foot (25') intervals) of the existing wetlands and stream channels to be protected shall be completed prior to clearing. All project staff shall be trained to recognize construction fencing or flagging that identifies wetland boundaries. Equipment shall not be moved into or operated in wetlands or stream channels that are not authorized to be filled.

C3. During clearing and filling at the various project sites, the Des Moines Creek Basin Committee shall take all necessary measures to minimize the alteration or disturbance of existing wetland and upland vegetation.

C4. All construction debris shall be properly disposed of on land so that it cannot enter a waterway or cause water quality degradation to state waters.

C5. Wash water containing oils, grease, or other hazardous materials resulting from wash down of equipment or working areas shall be contained for proper disposal, and shall not be discharged into state waters or storm drains.

C6. The Des Moines Creek Basin Committee shall provide notice to Ecology's Bob Wright and Ann Kenny at least 5 days prior to the start of placing fill in wetlands or other waters of the state, and within 30 days after completion of construction at each project site and mitigation site. Notification to Bob Wright can take place by e-mail to rowr461@ecy.wa.gov or by telephone to 206-909-6640 (cell). Notification to Ann Kenny may be to aken461@ecy.wa.gov or to (425) 649-7128.

C7. Clean Fill Criteria: The Des Moines Creek Basin Committee shall ensure that fill placed for the proposed project does not contain toxic materials in toxic amounts.

D. Emergency/Contingency Measures:

D1. In the event the Des Moines Creek Basin Committee is unable to comply with any of the permit terms and conditions due to any cause, the Des Moines Creek Basin Committee shall:

a) Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the violation and correct the problem.

b) Notify Ecology of the failure to comply. Spill events or other exceedences of water quality standards shall be reported immediately to Ecology's 24-Hour Report line at (425) 649-7000, and within 24 hours to Ecology's Bob Wright at 206-909-6640 (cell) and Norm Peck at (425) 649-7047.

c) Submit a detailed written report to Ecology within five days that describes the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

Compliance with this condition does not relieve the Des Moines Creek Basin Committee from responsibility to maintain continuous compliance with the terms and conditions of this Order or the resulting liability from failure to comply.

D2. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters. No refueling of equipment shall occur over, or within 50 feet of creeks or wetlands.

E. Other Permits and Approvals:

- Mitigated Determination of Non-Significance, City of SeaTac, City of Des Moines, issued June 28, 2002.

- A Hydraulic Project Approval (HPA) shall be obtained from the Washington Department of Fish and Wildlife prior to the commencement of in-water construction activities. A copy of the HPA shall be submitted to Ecology's Federal Permit Manager upon receipt.

- A Dam Safety Permit shall be obtained from the Department of Ecology's Dam Safety Office prior to the commencement of construction of the regional detention facility. A copy of the Dam Safety Permit shall be submitted to Ecology's Federal Permit Manager upon receipt.

- An NPDES Construction Stormwater Permit shall be obtained from Ecology prior to the commencement of construction of the regional detention facility.

F. General Conditions:

F1. For purposes of this Order, the term "DMCBC" shall mean the Des Moines Creek Basin Committee and its agents, assigns, and contractors.

F2. This certification does not exempt and is provisional upon compliance with other statutes and codes administered by federal, state, and local agencies.

F3. The DMCBC will be out of compliance with this certification if the project is constructed and/or operated in a manner not consistent with the project description contained in the Public Notice for certification, or as otherwise approved by Ecology. Additional mitigation measures may be required through other local, state, or federal requirements.

F4. The DMCBC will be out of compliance with this certification and must reapply with an updated application if five years elapse between the date of the issuance of this certification and the beginning of construction and/or discharge for which the federal license or permit is being sought.

F5. The DMCBC will be out of compliance with this certification and must reapply with an updated application if the information contained in the Public Notice is voided by subsequent submittals to the federal agency. Any future action at this project location, emergency or otherwise, that is not defined in the Public Notice, or has not been approved by Ecology, is not authorized by this Order. All future actions shall be coordinated with Ecology for approval prior to implementation of such action.

F6. Copies of this Order shall be kept on the job site and readily available for reference by Ecology personnel, the construction superintendent, construction managers and foremen, and state and local government inspectors.

To avoid violations or non-compliance with this Order, the DMCBC shall ensure that project managers, construction superintendents, and other responsible parties have read and understand relevant aspects of this Order, and any subsequent revision or Ecology-approved plans.

F7. The DMCBC shall provide access to the project site and all mitigation sites upon request by Ecology personnel for site inspections, monitoring, necessary data collection, or to ensure that conditions of this Order are being met.

F8. Nothing in this Order waives Ecology's authority to issue additional administrative orders if Ecology determines further actions are necessary to implement the water quality laws of the state. Further, Ecology retains continuing jurisdiction to make modifications hereto through supplemental order, if additional impacts due to project construction or operation are identified (*e.g.*, violations of water quality standards, downstream erosion, etc.), or if additional conditions are necessary to further protect the public interest.

F9. All documents required to be submitted to Ecology by this Order shall be submitted in triplicate to:
Ann Kenny
Washington Department of Ecology
3190 160th Ave SE
Bellevue, WA 98008-5452

F10. Liability: Any person who fails to comply with any provision of this Order shall be liable for a penalty of up to ten thousand dollars ($10,000) per violation for each day of continuing noncompliance.

Appeal Process:

Any person aggrieved by Order 03SEANR-5914 may obtain review thereof by appeal. Pursuant to ch. 43.21B. RCW, a person can appeal this order to the Pollution Control Hearings Board within 30 days of the date of receipt of this Order. Any such appeal must be sent to the Washington Pollution Control Hearings Board, PO Box 40903, Olympia, WA 98504-0903. Concurrently, a copy of the appeal must be sent to the Department of Ecology, Northwest Regional Office, Shorelands and Environmental Assistance Program, Attn: Ann Kenny, 3190 160th Avenue SE, Bellevue, WA 98008-5452. These procedures are consistent with the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Dated 6/28/04 at Bellevue, Washington.

Jeannie Summerhays, Section Manager
Shorelands and Environmental Assistance Program
Department of Ecology
State of Washington

Attachment A
ORDER # 03SEANR-5914
June 28, 2004

Des Moines Creek Regional Retention/Detention Facility
Technical Memorandums and Monthly Status Reports

Memorandum	Purpose
Event 1 Soil Sample Evaluation Tech Memo	• Evaluate Event 1 Arsenic Results • Determine Event 2 Sample Locations • Use Event 1 Unvalidated Data
Overexcavation/Clean Cap Extent Tech Memo	• Evaluate the Extent of Overexcavation • Estimate the Volume of Clean Cap Material Required
Excavation Materials Segregation & Volume of Clean Materials Tech Memos	• Determine Volume of Material requiring Segregation and Waste Management • Develop Materials Segregation Plan • Determine Volume of Material Available for use as Clean Cap
Soil Amendment Evaluation Tech Memo	• Evaluate the need for Iron Amendment
Soil Amendment Design Tech Memo	• Develop Treatability Study Work Plan • Document Treatability Testing Results • Evaluate Amendment mixture alternatives and specify design components
Preliminary Groundwater Quality Evaluation Tech Memo	• Evaluate Groundwater Quality to support dewatering system design and evaluate treatment options
Monthly Status Reports	• Evaluate and Report Data to Ecology on Monthly Basis • Modify Baseline Program As Necessary based on sample results